DOCUMENT RESUME

ED 123 202 SP 010 082

AUTHOR Elmore, Randy
TITLE An Analysis of Change in a Competency Based Teacher Education Program at the University of Georgia.
PUB DATE 74
NOTE 18p.; Paper presented at the Annual Meeting of the American Educational Research Association (Chicago, Illinois, April 1974)

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS *Education Majors; Elementary Education; *Higher Education; *Performance Based Teacher Education; *Program Evaluation; *Teacher Education; Undergraduate Students

ABSTRACT

Thirty-four junior and senior majors in elementary education were the subjects in this study to determine the effects of a competency based teacher education (CBTE) program at the University of Georgia. Four measures were used to determine the effects of the CBTE program. These included (1) the Dimensions of Teachers Beliefs (DTB) instrument, (2) the Tennessee Self Concept instrument, (3) a semantic differential instrument, and (4) the National Teachers Examination (NTE). A pretest-posttest design was employed with the DTB and Tennessee Self Concept instruments with tests being administered at the beginning and end of the program. The semantic differential and NTE tests were given at the end of the program. The results indicate that the teachers' beliefs were for the most part unchanged by the CBTE program. Only in one dimension, "child centeredness," was there a significant change. CBTE students valued "child centeredness" less at the end of the program than at the beginning. Other results were that students' self-concepts were not changed by the CBTE program, students' attitudes toward the program were positive, and students' NTE scores were not significantly different from those of students in the conventional programs within the college. (Author)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED123202

An Analysis of Change in a Competency Based Teacher Education Program at the University of Georgia

Randy Elmore, Ed.D.
Division of Elementary Education
The University of Georgia
Athens, Georgia

SP 010 082

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

A paper presented at the Annual Meeting of the American Educational Research Association, Chicago, April, 1974

An Analysis of Change in a Competency Based Teacher Education Program at the University of Georgia

Introduction

Competency Based Education has become a widely spread trend within the field of teacher education in the United States (Schmeider, 1973). As the movement has grown, various authorities have indicated the importance of measuring the effects of CBTE (Elam, 1973; Quirk, 1974). The tendency in the new programs, however, has been to concentrate on the development of administrative and instructional components and to neglect the task of evaluation (Quirk, 1974). This has generally been the case at The University of Georgia, however, efforts are now under way to develop assessment techniques to evaluate the effects of the competency based elementary preparation programs that are in operation. This paper will present several evaluative methods which were explored in connection with a pilot CBTE program that was initiated in the Division of Elementary Education in September, 1972. The methods studied include the use of the Dimensions of Teacher Beliefs instrument (Wehling and Charters, 1969), the semantic differential technique, the Tennessee Self Concept instrument, and the National Teachers Examination.

Hypotheses

The above instruments were selected and developed to explore the following hypotheses:

1. Intern attitudes toward the teaching process, as determined by the Dimensions of Teacher Beliefs Instrument will not change as a result of the CBTE Program.
    a. Intern attitudes toward individualization of learning will not change as a result of the CBTE Program.

b. Intern attitudes toward child centeredness will not change as a result of the CBTE Program.

c. Intern attitudes toward teacher centeredness will not change as a result of the CBTE Program.

d. Intern attitudes toward self concept development will not change as a result of the CBTE Program.

e. Intern attitudes toward positive reinforcement will not change as a result of the CBTE Program.

f. Intern attitudes toward subject matter emphasis will not change as a result of the CBTE Program.

g. Intern attitudes toward planning will not change as a result of the CBTE Program.

2. Intern self-concepts, as measured by the Tennessee Self-Concept instrument, will not change as a result of the CBTE Program.

3. Intern attitudes toward the CBTE Program, as measured by a semantic differential instrument, will be positive.

4. The National Teachers Examination Scores of CBTE interns will not be different from the scores for non-CBTE students.

Subjects

Thirty junior and thirty senior students majoring in elementary education were randomly selected to participate in the CBTE Program and were subjects in these studies. Fifty eight interns actually enrolled in the program and this number decreased to forty-eight after the fall quarter. Thirty-four interns were in the program spring quarter. Of those who left the program during the year three transferred to other universities, eight returned to

take arts and science courses necessary for graduation, four graduated early, five changed majors, one left for health reasons, and three were unexplained. The thirty-four who finished the year responded to pretests and posttests on the Dimensions of the Teacher Beliefs instrument, the Tennessee Self-Concept instrument, and to a posttest on the semantic differential. Fifteen interns took the National Teachers Examination.

The CBTE Program

Competency based teacher education was defined in the program as "a teacher preparation program which precisely specifies that teachers must exhibit those competencies assumed to promote desirable pupil learning and/or demonstrate their ability to promote desirable learning among pupils (Johnson and Shearron, 1973)." The specific assumptions underlying the project were as follows: a model teacher education program should (a) be competency based; (b) provide for differences among individual learners; (c) provide for humanization and personalization of instruction; (d) be socially relevant; (e) be managed by systems technology; (f) require systematic evaluation, review, and revision; (g) be accountable for student progress; and (h) be organized and managed by the principle of multi-institutional responsibility (Johnson, 1972).

The project involved personnel from The University of Georgia and The Clarke County Public School System. Sixty university interns, juniors and seniors majoring in elementary education, were students in the program. The university faculty included twelve professors representing the following curriculum areas: elementary education, mathematics, science, social science, language arts, reading, physical education, counselor education, and educational psychology. The principals and faculties of two elementary schools

were also involved. All participants worked together as a group for the year.

Essentially, the group functioned to govern and operate the program. This was accomplished through the establishment of a list of competencies and the development of individualized instructional activities and assessment measures. The following characteristics indicate the ways in which the CBTE program was unique and different from other programs of instruction within the College of Education.

1. The program was governed in a democratic way by representative interns, professors, and public school staff.
2. In the campus based instruction, learning was individualized through the use of modules and learning contracts.
3. Interns spent approximately half their instructional time in "on the job" experiences in two elementary school field centers.
4. Interns received human relations training from a professional counselor.
5. Interns, professors, and teachers, remained together as a group for the year.

Procedures

A pretest-posttest design was utilized to explore the hypotheses dealing with attitude and self concept change. During the first meeting of all interns in September, the Dimensions of Teacher Beliefs instrument and the Tennessee Self Concept instrument were administered. Both were given again at the end of the year, in May. A semantic differential instrument, designed to measure attitudes toward the program, was also given at the end of the year.

Interns were asked to respond to items in the seven dimensions of the DTB according to a four point scale from strongly agree to strongly disagree. The Tennessee Self Concept instrument required responses to one hundred items according to a five point scale. The semantic differential involved ten concepts which were to be rated according to three sets of bi-polar adjectives on a seven point scale. Finally, fifteen of the senior interns graduated and took the National Teachers Examination. The scores for these interns were compared to those of fifteen students in a field experience program[1] and to those of fifteen students in the regular program.[2]

Results

The results of the various analyses which were conducted will be reported according to the order of the hypotheses of the study.

1. The first hypothesis raised the question of whether interns attitudes toward the teaching process would be changed by the CBTE Program. The Dimensions of Teacher Beliefs Instrument was utilized to explore this question in terms of the goals and characteristics of the CBTE Program. To do this the subjects were asked to respond to 86 items according to a four step scale including strongly agree, mildly agree, mildly disagree, and strongly disagree.

In the analysis of the data, the items of the instrument were logically categorized into dimensions which corresponded to educational goals that were valued highly or lowly in the CBTE program. The dimensions included the following categories: individualization (valued highly); child centeredness (valued highly); teacher centeredness (valued lowly); self concept development

[1]The field experience program is one in which students take regular program courses with some field experience each quarter for four quarters.

[2]The regular program involves coursework with student teaching during the final quarter.

(valued highly); use of positive reinforcement (valued highly); subject matter emphasis (valued highly); and planning (valued highly).

Table 1 presents the results of matched t-tests which were conducted on the group means for the seven dimensions.

These results indicate no significant change in the interns attitudes toward six of the seven dimensions of the teaching process. There was a significant change in a negative direction for the dimension of child centeredness (at the .01 level of significance). Interns appeared to value child centeredness less as a result of experiences in the CBTE program.

2. The second hypothesis asked whether or not the self concepts of interns would change as a result of the CBTE Program. To evaluate this question self criticism and total positive scores of the Tennessee Self Concept Instrument were analyzed. T-tests were conducted on the group means for these two areas of the test. Table 2 presents the results of these tests. These data indicate that the self concepts of the interns were unchanged as a result of experiences in the CBTE Program.

3. Hypothesis three stated a belief that the attitudes of the interns toward the CBTE Program would be positive. A semantic differential was constructed to investigate this hypothesis. To accomplish this the following concepts were selected as descriptors of basic characteristics and goals of the CBTE Program: individualized learning, modules, learning contracts, governance, field center, evaluation, class discussion, field experience supervision, and human relations.

The interns were asked to indicate their feelings about the concepts by marking sets of scales involving ten bi-polar adjectives taken from Osgood's lists of scales with highest factor loadings for the American language (Osgood, 1964). Table 3 contains the evaluation, potency, and activity factor loadings

TABLE 1

Summary of t-tests for Changes on the Dimensions of Teacher Beliefs

Dimensions	Mean Difference	S.D.	T-Score	Level of Significance
1 - Ind.	-.382	2.723	-0.807	.426
2 - Child Cen.	-2.029	4.253	-2.741	.010*
3 - Teacher Cen.	-0.235	7.084	-0.191	.500
4 - Self Con.	-0.725	2.305	-1.833	.076
5 - Pos. Reinf.	-0.118	1.875	0.360	.500
6 - Subj. Mat.	2.471	7.770	1.827	.077
7 - Planning	-0.588	3.219	-1.050	.302

* $p < .01$

TABLE 2

Summary of t-tests for changes
on the Tennessee Self Concept Instrument

Self Concept Scores	Pretest Means	Posttest Means	T Scores
Positive Score	362.5	368.6	.79
Self Criticism Score	37.6	36.5	.74

TABLE 3

Principal Component Factors for
American Language Culture

Evaluation		Potency		Activity	
nice-awful	.96	big-little	.81	fast-slow	.64
sweet-sour	.94	powerful-powerless	.95	noisy-quiet	.56
heavenly-hellish	.93	deep-shallow	.64	young-old	.55
good-bad	.93	strong-weak	.68	alive-dead	.55
mild-harsh	.92	high-low	.64		
happy-sad	.91	long-short	.64		

for the adjectives with highest loadings (Osgood, 1964).

As indicated in Table 4, the attitudes of the interns toward the CBTE Program appeared to be positive. They rated all the concepts positively except the concepts of modules and learning contracts.

Eight of the ten concepts were rated positively on the evaluation factor. Field centers received the highest rating of 2.15 and learning contracts received the lowest rating of -.72. The concept of modules also received a negative rating of -.08 on the evaluative factor. The same pattern of responses existed on the activity factor as on the evaluative factor. All the concepts were rated positively except modules and learning contracts. The ratings on the activity factor were -.24 for modules and -.57 for learning contracts. On the potency factor, all concepts were rated positively.

4. The fourth hypothesis questioned whether the national teacher examination scores of CBTE interns would be different from the scores of non-CBTE students. The Mann Whitney U test was used to determine if differences existed between the two sets of scores. The tests were conducted on the area of elementary education scores, and the commons examination scores. Table 5 summarizes the U scores for the different groups and tests. The data indicate there were no significant differences between the N.T.E. scores of CBTE and field experience students. They also indicate that no significant difference exists between the scores of CBTE and regular program students.

Discussion

The results of the various studies will be discussed in the order in which they were presented.

First, the results of the DTB study indicate that intern attitudes toward the teaching process were only slightly affected by the CBTE Program. Only on

TABLE 4

Summary of The Evaluation, Activity, and Potency Scores for the Semantic Differential Instrument

Concepts	Evaluation	Activity	Potency
a. Field Centers	2.15	1.20	1.03
b. Human Relations	1.85	.71	.92
c. Competencies	1.17	.47	1.29
d. Evaluation	1.19	.53	.89
e. Individualized learning	2.02	.93	1.49
f. Governance Team	1.77	.61	1.12
g. Modules	-.08	-.24	1.04
h. Learning Contracts	-.72	-.57	.47
i. Field Experience Supervision	1.80	.73	.67
j. Class Discussion	1.63	1.30	1.33

TABLE 5

Summary of the Mann-Whitney
U Tests for Differences on National
Teacher Examination Scores

	U Scores	
Groups	Area	Commons
CBTE-Field Experience	100	80
CBTE-Regular Program	58*	72*

* $p. < .10$

one dimension, child centeredness, was there a significant change in attitude. On this dimension it appears that interns began to value less the idea that most decisions about the learning process should be made on the basis of the needs and interests of individual children. It is difficult to speculate about why this occurred. The CBTE program involved a very student centered process, but the attitudes of the professors appear not to have been adopted by the interns. Instead it seems they began to value less the goal of student centered teaching. Perhaps, the situations in which they participated in the field experience caused them to believe that placing the child at the center of the learning process was not as important an idea as they had thought.

A similar change was found for the idea of developing self concept although not at a significant level (.08 level of significance). The interns appeared to value this idea less as a result of experiences in C.B.T.E. The dimension of subject matter was also valued differently. However, the change was not significant (.08 level) and the change was in a positive direction. Interns began to believe that subject matter was more important than they previously had thought.

Secondly, the results of the self concept study revealed that the self concepts of the interns were unchanged by the CBTE Program. Potentially, there may have been positive or negative changes. More personal attention was given the interns by the professors and teachers than in previous programs and the faculty expressed considerable desire to help each intern grow as a person and a teacher. This was especially true in the case of the human relations training. These conditions may have caused positive changes. There were also features of the program which might have cause negative changes. Students were asked to become more independent and to accept more responsibility than usual. They were also observed teaching quite a lot more than in previous

programs. However, there were no significant changes in the self concepts of the interns.

Thirdly, the results of the semantic differential indicate that the interns believed the CBTE Program to be good, active, and strong. On a seven point scale with zero at the center, they averaged rating the concepts at a level above plus one. The high rating given the concept of field center was not surprising. Interns consistently stated that they believed their work in the field center to be most valuable part of their preparation. Two of the concepts, modules and learning contracts were rated slightly negatively on the evaluation and activity factors. One explanation for this may lie in the fact that both the modules and contracts required more independent study than that to which the interns were accustomed. This may have been viewed as an unpleasant change. This would explain the low evaluative rating. The modules and contracts are usually completed individually or with little interaction with instructors and other students and this may explain the fact that interns rated them negatively on the activity factor. However, it should be pointed out that the negative ratings averaged only one half point below zero.

Fourthly, the results of the N.T.E. analyses indicate there were no significant differences between the scores of CBTE interns and those of field experience and regular program students. It was believed that CBTE interns might score lower on a cognitive test of teaching ability because of the emphasis placed upon field work in the program. For example, classroom performance is not only valued philosophically, interns spend an average of one half their instructional time in campus classes and one half in practice in the field centers. The fact that CBTE interns scored as well as field experience and regular program students while spending only half as much time in class is an interesting finding and may be an area for further research.

There was some difference (.10 level), though not significant, between the scores of CBTE interns and regular program students. Perhaps the program goals of governance, individualization and extensive field work can account for this.

In summary, the instruments explored in this study appear to be suitable for use in evaluating the effects of CBTE programs. However, these instruments were designed to evaluate affective and cognitive areas. Plans for the future should include measures to evaluate intern performance in the schools. Especially needed are techniques for exploring teacher effectiveness as indicated by pupil growth and achievement.

References

Elam, Stanley, Performance-based teacher eudcation: What is the state of the art? American Association of Colleges for Teacher Education, 1971, No. 1, 21-22.

Johnson, Charles E. Some basic principles underlying performance based programs for higher education. The University of Georgia. Mimeographed, 1972.

Osgood, Charles E. Semantic differential technique in the comparative study of cultures. In L. A. Jakobovits and M. S. Myron. Readings in the Psychology of Language. Englewood, N.J.: Prentice-Hall, 1967, 379.

Quirk, Thomas J. Some measurement issues in competency based teacher education. Phi Delta Kappan, 1974, LV (5), 316-319.

Schmeider, Allen A. Competency-based education: The state of the scene. American Association of Colleges for Teacher Education Performance Based Teacher Education Series, 1973, No. 9.

Shearron, Gilbert F., and Johnson, Charles E. A CBTE program in action: University of Georgia. The Journal of Teacher Education, 1973, 24, 187.

Wehling, Leslie J., and Charters, W.W. Dimensions of teacher beliefs about the teaching process. American Educational Reserach Journal, 1969, 6 (1), 7-29.